

1. STRATEGIC SECURITY, INTERNATIONAL TREATIES AND AGREEMENTS, AND COMBATTING PROLIFERATION

[Related topics: 2.4, 4.5, 4.11, 4.31, 4.32, 4.41, 4.45, 4.47, 4.52, 4.60, 5.29, 5.30]

1.1 Examine the role of nuclear weapons within the new strategic triad: what are the roles, missions, and tradeoffs of nuclear weapons within the concept of global strike? (See also topics 1.27, 1.36)

- What are the tradeoffs of nuclear weapons versus advanced conventional weaponry? When can/should one be substituted for the other?
- Are there specific targets that require a nuclear weapon (hard and deeply-buried targets (HDBT), CBW facilities)?
- Is increasing reliance on conventional global strike marginalizing U.S. nuclear weapons and undermining U.S. nuclear deterrence?
- Does U.S. conventional preeminence create unintended incentives for nuclear proliferation?
- Do today's non-nuclear force capabilities meet future deterrence requirements?
- What impact do the laws of armed conflict have on nuclear weapon employment in the post Cold-War environment?
- Discuss suggested changes to nuclear doctrine and/or roles and missions for nuclear weapons in the post-Cold War environment.
- What measures of effectiveness should be used in assessing tradeoffs among the different legs of the triad?
- Discuss or suggest possible force structure requirements that might better enable the U.S. to expedite realization of the new Triad.
- What is the future of the ICBM force, the bomber force, the SSBN force?
- Explore the possible consequences of nuclear first-use by the U.S. or some other nation or non-state actor.
- What might be the international political, diplomatic, and strategic responses to the first use of a nuclear weapon in combat?
- What are the arms control implications of dual-use long-range ballistic missiles? (i.e. common missiles delivering conventional or nuclear weapons?)

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Priority: 1

Key terms: PGMs, HDBT, CAV, nuclear missions, non-nuclear weapons, global strike, New Triad

1.2 How can we deter non-state actors from acquiring, using, and/or proliferating WMD? (See also topic 1.20)

- Are different policy instruments required for deterring states and non-state actors?
- Does state-sponsorship alter this equation? How?
- Is it practical for terrorists to acquire or employ sophisticated delivery systems, including ballistic missiles?
- How is deterrence inherently idiosyncratic—that is, unique to each actor?

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Priority: 1

Key terms: WMD acquisition and use, deterrence, non-state actors, state-sponsored terrorism

1.3 How will arms control agreements impact future air and space operations and force structure? (See also topic 1.4)

Would START, INF, or other agreements, need to be modified to optimize conventional ICBMs, or other conventional alternatives?

What would be the political, financial, operational, compliance, and implementation ramifications?

Will existing agreements conflict with U.S. policy regarding USAF doctrine for space?

Should the U.S. review further adherence to existing arms control agreements?

Citing past examples, discuss potential impact of the duration and unintended consequences of arms control.

POC: Dr. Mitch Nikolich (AF/A3SPI, CTR, (703) 614-0389, mitch.nikolich@pentagon.af.mil)

Priority: 1

Key terms: UAVs, CAVs, space weapons, conventional ICBMs/SLBMs, INF

1.4 How do existing arms control agreements limit the integration of advanced technology into modern operational concepts? (See also topic 1.3)

- Discuss the impact of advances in technology (e.g. UCAVs, hypersonic weapons, non-lethal weapons, air-launched cruise missiles) in relation to any of the following treaties and/or agreements:
 - CFE or the adapted CFE regime
 - START
 - CWC (e.g. relationship between the regime and non-lethal weapons)

Explore and discuss the escalatory nature of advanced conventional weapons.

POC: Mr. John Jones (OUSD, (AT&L)/TC, (703) 697-8157, john.jones@osd.mil)

Priority: 1

Key Terms: UCAVs, hypersonic weapons, non-lethal weapons, air-launched cruise missiles

1.5 Examine the Open Skies Treaty.

How does the U.S. benefit from conducting observation missions in the Open Skies Treaty?

Conduct a cost/benefit analysis of the Open Skies Treaty regime.

What might be some other cost effective alternatives to the Open Skies treaty?

Has the implementation of the Open Skies Treaty met or exceeded the initial expectations of the treaty's negotiators?

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Priority: 1

Key Terms: OSCC, OC-135

1.6 What are Islamic attitudes toward the legitimacy of international law and international agreements?

- Do they differ from those of the West?
- If so, what are the implications for the potential success of arms control and other diplomatic means to address global security issues such as proliferation?
- How does the global security environment shape interpretations of Islamic laws and their relationship to international law and agreements?
- If so, discuss the implications regarding adherence to the laws of war.

POC: Dr. Brent Talbot (USAFA, (719) 333-9425, brent.talbot@usafa.af.mil)

Priority: 1

Key Terms: Islamic law, international law, multilateral regimes, LOAC, LOW

1.7 How successful has U.S. counterproliferation policy been in the past five years?

- How well does the public understand these policies?
- How effective are current approaches?

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Priority: 1

1.8 Assess the effectiveness of the global nonproliferation regime.

Should the NPT remain the cornerstone of the international nonproliferation regime?

How should the international nonproliferation regime be broadened?

How should U.S. diplomatic efforts emphasize the idea that peaceful nuclear energy is not an unconditional right?

Propose suggestions for improving supplier regimes.

Suggest a strategy for the U.S. to assist other nations in rationalizing their national export control laws in an effort to standardize laws that apply to all states.

Are multilateral organizations still relevant with regard to these efforts?

Suggest ways to improve international cooperation within the NPT regime.

Reassess the “core agreement” within the NPT between nuclear weapons states and non-nuclear weapons states.

How can regional security frameworks bolster the international nonproliferation regime?

To what extent has proliferation really occurred?

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Priority: 1

Key Terms: NPT Review Conference, Nuclear Weapons states, Non-nuclear Weapons states, Nuclear Suppliers Group

1.9 One of the highest national priorities is ensuring the capability to dissuade, deter, and defeat adversary use of weapons of mass destruction (WMD). This requires that the DoD have an array of capabilities across eight disparate mission areas. In the USAF, the capabilities to address these mission areas are widely

scattered across functional communities, field operating agencies, and the MAJCOMs. Is the USAF correctly organized to Combat Weapons of Mass Destruction?

Does the lack of a single center of gravity for these capabilities hinder the USAF's ability to effectively combat WMD?

As USSTRATCOM moves toward creating a centralized approach to addressing these missions, how should the USAF organize to support these emerging requirements?

Evaluate how the USAF can best support Warfighter capability across the range of Combating WMD mission areas.

Determine whether the organizational structures—at Headquarters, MAJCOM, Wing and USAF-wide—are optimal for ensuring a robust capability for USAF to meet COCOM requirements related to countering the WMD threat.

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Priority: 1

Key Terms: National Strategy to Combat WMD, National Military Strategy to Combat WMD, USSTRATCOM, C-CBRNE roles and responsibilities, venue, timing, lifecycle, gaps, institutional, strategy, implementation.

1.10 Examine the potential C-CBRNE roles and missions across the Services for remotely controlled, unmanned vehicles (land, air, & sea).

- What are the current limiting factors to employing such vehicles (resources, technology of the vehicle, technology of the on-board package, CONOPS, etc.)?
- What types of packages could be useful on such an asset (standoff/point detectors, EO/IR camera, agent collection sampler)?
- How can these be used for improvements in passive defense (current CONOPS)? offensive operations (in conjunction with an Agent Defeat weapon)? How about the other pillars of C-CBRNE?
- Can a modular, flexible suite of packages be developed for use on a variety of vehicles (across all mediums, and for all Services/Agencies)?
- Can the DoD leverage the needs of other Agencies to reduce R&D/acquisition costs in the development process, or are the capabilities each group needs just too different?
- How can these vehicles be employed to do this mission? Physically launched by personnel? Launched by another weapon system (from the belly of an aircraft)? Launched automatically from a pre-positioned location without physical contact by personnel?

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Priority: 1

Key Terms: Remotely controlled unmanned vehicles, unmanned aerial vehicles, UAV, aerostats.

1.11 Examine and assess the existing definitions for C-CBRNE and WMD passive defense and consequence management. Examine and assess the roles and responsibilities of the various DoD and government authorities in passive defense and consequence management. (See also topic 1.12)

- What activities should be classified as passive defense?
- What activities should be classified as consequence management?
- What level of capability should consequence management seek to restore (full pre-attack capability or minimum essential services/capabilities)?
- Should the situation (i.e., hostile or permissive environment) dictate whether activities are classified as passive defense or consequence management?
- What should the role of the DoD (particularly the Air Force) be in domestic consequence management following a CBRNE event?
- What should the role of the DoD (particularly the Air Force) be in foreign consequence management following a CBRNE event?

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Key Terms: Consequence management, passive defense, DoD support to civilian authorities, WMD consequence management, USNORTHCOM, FEMA.

1.12 Assess current definitions of weapons of mass destruction (WMD) and discuss whether they are adequate to capture current and emerging threats. (See also topic 1.11)

- What criteria should be considered when proposing a definition (e.g. effects-based vs. threshold-based, political aspects, others?)?
- Are some threats so distinctive they should be addressed separately? For example, should high-yield explosives be included as WMD with chemical, biological, radiological, and nuclear (i.e., CBRNE) weapons?
- Should weapons of mass disruption be included in the definition? Why or why not?
- Are there technologies that might be captured by too broad of a definition that the United States would not like to see denoted as WMD (e.g., directed energy weapons)?
- What are the potential proliferation or legal implications of differing definitions?

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Priority: 1

Key Terms: Weapons of Mass Destruction, WMD, CBRNE, definition, effects-based, threshold, high-yield explosives, weapons of mass effects, weapons of mass disruption.

1.13 Examine the intersections between Force Protection, Homeland Security (HLS), and Homeland Defense (HLD) in achieving C-CBRNE objectives; discuss the organizational stove-pipes and propose solutions to better leverage the efforts of the various military (active, guard, and reserve) and other government organizations.

Determine/define the intersections between relevant DoD and other government organizations.

Discuss potential synergies and redundant efforts.

Conduct a gap analysis to determine how C-CBRNE could be better integrated into Force Protection, Homeland Security and Homeland Defense.

Are there different implications for peacetime vs. wartime in terms of organizational lines of authority for C-CBRNE?

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Priority: 1

Keywords: Force protection, CBRNE, Homeland Security, HLS, Homeland Defense, HLD, organization, tools, expertise, CONOPs, technologies, peacetime, wartime, stove-pipes

1.14 Assess how the DoD and other government and civilian organizations support combating WMD-related science and technology (S&T) needs.

Identify combating WMD S&T organizations and activities.

Identify S&T shortfalls and duplications of effort. Propose solutions to cover shortfalls and avoid duplication of effort in S&T (e.g. the development of a forum for national labs & DoD, a single oversight body).

Examine the role of private industry in combating WMD S&T activities. Is there potential for increased collaboration?

Discuss approaches to identifying new areas/ideas for combating WMD S&T.

Assess the potential impact of the new USSTRATCOM and DTRA relationship.

Emphasize S&T relevant to counterforce capabilities (including improved intelligence, surveillance, and reconnaissance capabilities).

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Priority: 1

Key Terms: Science, technology, S&T, national labs, DoD, shortfalls, duplication of effort, organization.

1.15 Examine the Air Force role in the Proliferation Security Initiative (PSI) interdiction mission.

Discuss how the Proliferation Security Initiative applies to the USAF. What capabilities does the USAF require to conduct an aerial interdiction or support ground/maritime interdiction?

What are the current USAF shortfalls in terms of organize, train, and equip to support these missions?

Propose Rules of Engagement for aerial interdiction of CBRNE materials, technology, or expertise. What are key considerations in formulating TTPs for this mission?

Discuss the legal implications of aerial interdiction.

The researcher may choose to use case studies of lessons learned in the war on drugs, enforcing no-fly zones, maritime interdiction, or other aerial interdiction.

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Priority: 1

Key Terms: Proliferation Security Initiative (PSI), capabilities, equipment, policy, ROE, aerial interdiction, drug war, no-fly zone, maritime interdiction, WMD interdiction, case study.

1.16 How can the USAF better protect the total installation population, including Reserve, Guard, coalition partners, contractor/civilians, and dependents to ensure they are prepared to survive and operate in a post-CBRNE event or high-threat environment? (See also topic 1.18)

What functions should/should not be outsourced due to CBRNE or high-threat environments? Discuss the political and legal implications of outsourcing.

How should this issue apply to third country nationals?

What are the primary considerations for commanders when making decisions about protecting civilians from CBRNE effects?

What are the legal implications for protecting non-military personnel? (e.g. vaccination, protective gear, training.)

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Priority: 1

Key Terms: Mission essential personnel, total force, contractor integration, military outsourcing, force protection, Reserve, Guard.

1.17 Examine the impact of restriction of movement (ROM) including social distancing, quarantine, and isolation on military operations.

How does a commander carry out effective operations while adhering to ROM requirements?

What information is needed to evaluate risks and benefits of continued operations?

What are the legal and logistics ramifications of imposing ROM? Identify the limits of the commander's authority to impose ROM (see AFI 10-2603).

Examine lessons learned from quarantines imposed during the spread of Severe Acute Respiratory Syndrome (SARS). Discuss the implications of the successes and shortfalls for military operations.

What are the key points in making the decision to impose ROM (numbers, extent of contagion, mission impacts, legal impacts on communities and host nations, etc.)?

Consider the operations impact of ROM associated with containing pandemic influenza.

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Keywords: Biological warfare, biological defense, Severe Acute Respiratory Syndrome, SARS, quarantine, contagion, restriction of movement, host-nation agreements on restriction of movement, civil authorities, civil support, DoDD 6200.3 *Emergency Health*

Powers on Military Installations, AFI 10-2603 Emergency Health Powers on Air Force Installations.

1.18 Passive defense against WMD at Joint and Combined operations bases pose significant operational challenges for commanders. Resolving many of these challenges may require a new approach to passive defense operations. (See also topic 1.16)

How should the USAF handle Allies/Coalition/U.S. Joint Forces that are not at the same level of readiness? Should the USAF provide them with equipment, medical supplies, personal or collective protection?

How should we train/exercise Joint/Coalition forces to operate in a CBRNE environment?

Is technology transfer a concern? Should it be?

The researcher may want to conduct a case study analysis (e.g. examine Joint operational experience in the Gulf War or OIF).

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Priority: 1

Key Terms: Force protection, passive defense, Joint, Allies, doctrine, civilian, military, CBRN, force protection, operations, fixed-site, doctrine, policy, coalition, biological warfare, chemical weapons.

1.19 What are the proliferation implications of transnational Biotech corporations?

Should materials and expertise transfers within/between multi-national companies be monitored and if so, how?

How should the U.S. government engage the Biotech industry to address potential transfers?

Identify potential areas of proliferation concern with regard to transnational corporations. Examine dual-use export control legislation and multilateral agreements. Assess their implications for transnational corporations. Identify areas for improvement in these regimes.

What are the strategies to identify and track dual-use technology in this context?

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Priority: 1

Key Terms: Proliferation, transnational corporation, technology transfer, dual-use technology, export controls, biotech industry.

1.20 Examine deterrence-related issues.

- What does deterrence mean today?
- Who are we trying to deter?
- What actions/events are we trying to deter?
- What are the requirements necessary for deterrence to function?

- How do we define deterrence success/failure?
- What are the consequences if deterrence fails?

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Priority: 2

Key terms: deterrence, minimum deterrence, strategic deterrence, inter-war deterrence

1.21 What benefits does the U.S. derive from the Cooperative Threat Reduction (CTR) program?

Is the United States providing an indirect subsidy for Russian weapons programs?

Has CTR proven of value overall? How do you evaluate the effectiveness of CTR?

Are there alternatives to CTR that achieve the same end?

Is CTR expandable to other countries, such as Pakistan and India?

Is the CTR expandable to other arenas in addition to nuclear and CW programs, such as BW, or missile technologies, etc?

POC: Mr. Brandon Buttrick (STATE, AC/SNI, (202) 647-9336, buttribr@state.gov)

Priority: 2

Key terms: Cooperative Threat Reduction (CTR), Russia, United States

1.22 What is the potential impact on regional stability and crisis management of deploying U.S. missile defenses in any of the following regions? (See also topic 1.37)

- India-Pakistan?
- Northeast Asia?
- Middle East (Syria, Israel)?
- China-Taiwan?

POC: STATE Department & Mr. Forrest Waller (SAIC, (703) 415-3335, wallerf@saic.com)

Priority: 2

Key terms: missile defense, regional stability, crisis management

1.23 How important is cruise missile defense (e.g., homeland, theater) to future U.S. security strategy?

- What is the status of existing cruise missile defense capabilities?
- What emerging technologies exist for cruise missile defense?
- What are the costs involved?
- Define the threat.

POC: Dr. Tara Drozdenko (STATE, (202) 647-9988, tarad@state.gov)

Priority: 2

Key Terms: cruise missiles, missile defense

1.24 What should the U.S. response be to a nuclear weapon test by another state? (See also topic 1.25)

- Peer competitor (e.g., Russia, China)?
- Regional Competitor (e.g., North Korea, Iran)?
- Non-aligned country (e.g., India, Brazil)?
- U.S. rationale and conditions to allow testing?

POC: Dr. Smith, INSS, (DSN 333-2717, (719) 333-2717, james.smith@usafa.edu)

Priority: 2

Key Terms: nuclear weapons, testing, proliferation

1.25 What would be the international political, diplomatic, and strategic responses to the first use of a nuclear weapon in combat? (See also topic 1.24)

- Possible consequences of first use of nuclear weapons by another state or a non-state actor during peacetime or conflict.
- Circumstances of first use, consequence management, and the international response.

POC: Dr. Kerry Kartchner (DTRA/ASCO, (703) 767-5713, kerry.kartchner@dtra.mil)

Priority: 2

Key Terms: nuclear weapons, first-use

1.26 Examine U.S./China strategic security relations.

- What would be the usefulness of institutionalizing a strategic dialogue with China on missile defense, regional security, energy security, and deterrence?

What is the impact of globalization on the above aspects of U.S./China relations?

What are the implications of China-Russia relations for U.S. security?

POC: Dr. Peter Lavoy, (Naval Postgraduate School (NPS) (831) 656-3167, plavoy@nps.edu)

Priority: 2

Key Terms: strategic dialogue, Sino-American relations, missile defense, regional security, energy security, deterrence

1.27 Is there a future for U.S. forward deployed nuclear weapons in Europe? (See also topic 1.1)

- Is this a requirement of NATO?
- How can production policy and force size asymmetries between the U.S. and Russia be resolved?
- What are the advantages and disadvantages of maintaining the current posture?

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Priority: 2

Key Terms: SSBNs, SLBNs, START

1.28 How will (is) the U.S. civil nuclear energy initiative (agreement) affecting the strategic balance and regional stability in South Asia and Asia?

- Should the U.S. encourage a strategic build-up by India?
 - What are the advantages and disadvantages?
- How can the U.S. limit an arms race in Asia and South Asia?
- What type of conventional buildup should the U.S. encourage and assist India to pursue?
- What other forms of military cooperation should the U.S. seek with India?

POC: Dr. Bernadette Kilroy, (STATE, ISN\SPO, (202) 736-4235, kilroyba@state.gov)

Priority: 2

Key Terms: Missile Defense Agency, Ship-based missile defense (SMD), Patriot Advanced Capability-3 (PAC-3)

1.29 For several decades U.S. policy has prohibited the reprocessing of fuel from nuclear reactors due to proliferation concerns. The increasing demand for energy and waste storage issues contributes to the basis for reconsidering this policy. What policy is appropriate today?

- Examine the benefits and problems associated with other nations' reprocessing programs.
- What is the potential for established/new extraction technologies (i.e., PUREX/UREX)? What are their proliferation characteristics?
- What would be the ramifications of a new policy allowing reprocessing?

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Priority: 2

Key Terms: Reprocessing, nuclear fuel cycle, nuclear material

1.30 Examine aero medical evacuation policies in a contaminated environment.

What are the national policies on medevac of contaminated patients or remains?

What is the capacity for the evacuation of contaminated patients?

What are the requirements for noncombatant evacuation operations (NEO)? What are the political/legal ramifications for the evacuation of contaminated civilians?

Is there a medical evacuation requirement? Is there a mobile medical unit requirement?

Investigate the potential for medical CRAF (Civil Reserve Air Fleet) in the event of a contaminated casualty surge—would CRAF provide back-flow from theater?

What modalities are necessary?

How should levels of decontamination be determined prior to transport?

Are there case studies for comparison?

What are the work-arounds in lieu of transporting?

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Priority: 2

Key Terms: aero medical evacuation, BW, contamination, mobile medical unit, med evac, Civil Reserve Air Fleet, decontamination, case study, transport, work around.

1.31 Examine the threat posed by air, sea, and land Unmanned Vehicles (UV) and potential countermeasures.

What is the threat? How might an adversary use commercial UVs as a warfighting weapon or weapon of terror? Combined with CBRNE?

What role might the USAF be assigned or how can it contribute to defending against UVs? What are effective countermeasures against them?

Identify the key issues regarding UV delivery of chemical or biological weapons (CBW). Which countries or groups might have the capability to use them as CBW delivery systems?

How is it possible to regulate UVs? Assess the extent to which current domestic and international flight regulations apply to UVs.

Would proliferation prevention measures be effective against this threat? Why or why not?

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Priority: 2

Key Terms: Unmanned Vehicle, UAV, CBW delivery, International Civil Aviation Organization, ICAO, Federal Aviation Administration, FAA.

1.32 Examine the lessons learned from mass vaccination programs. How can these lessons be leveraged to increase the effectiveness of future vaccination efforts?

Review the recent vaccination programs. Analyze differences in policy in the United States and outside the United States.

How can policy be enforced? Who should receive compulsory vaccinations? Who should be provided vaccinations on a voluntary basis?

Examine similar Allied/Coalition programs. Explore how host nation programs might affect U.S. forces.

What can be done in the long term (acquire more vaccines; redirect resources dedicated to vaccine acquisition to other BW preparation methods)?

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Priority: 2

Key Terms: Vaccines, vaccination program, compulsory vaccination, voluntary vaccination, biological warfare, biological defense, Allies, medical records, acquisition, commanders, anthrax, smallpox.

1.33 Identify “best practices” of other nations in addressing C-CBRNE.

- Are best practices applicable to U.S. operations? Which can be adopted for use by the United States?
- The researcher should examine how Allied forces interact with their local civilian populations when responding to a CBRNE incident.

- The researcher should also focus on countries that have extensive experience with readiness for C-CBRNE operations (e.g. Israel, United Kingdom).

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Priority: 2

Key Terms: Best practices, passive defense, consequence management, Allies, fixed-site operations, CONUS, doctrine, counterterrorism, civilian, civil-military operations, civil affairs, civil support, force protection, operations, fixed-site, doctrine, policy, Allies, coalition, biological warfare, homeland defense, homeland security, CBRNE, CONOPS.

1.34 Survey and capture recent exercise and wargaming threat scenarios for access denial and terrorism where WMD are employed. Identify realistic scenarios that are under utilized and develop alternative and innovative scenarios for future consideration.

Conduct a survey of past scenarios.

Describe how a library of threat scenarios might be developed, maintained, and accessed by exercise or game developers.

Identify significant trends/areas of omission in WMD scenario development.

What are the sources and differentiators of WMD scenarios and how have they played out?

Define important elements that effective WMD threat scenarios should include. Do existing WMD threat scenarios adequately address these elements?

Brainstorm and develop some innovative WMD threat scenarios that have not been well addressed but merit analysis and game play.

POC: Lt Col Brian McNulty (AF/A3SC, (703) 614-5433 or DSN 224-5433, brian.mcnulty@pentagon.af.mil)

Priority: 3

Key Terms: Scenarios, access denial, weapons of mass destruction, WMD, force protection, UAV, case study, wargaming, terrorism, CBT simulators.

1.35 Survey CBRNE vulnerability and mitigation strategy assessment tools.

Identify the various vulnerability assessment tools across DoD agencies and organizations.

What current and emerging threats do they address?

Can vulnerability and mitigation tools be combined into more powerful tools?

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Priority: 3

Key Terms: Vulnerability, mitigation, strategy, assessment tools, emerging threats.

1.36 Under what conditions should nuclear weapons be used to preempt or retaliate for chemical, biological, or radiological weapon (CBRW) use?

- Would adopting a declared policy of retaliating against CBRW attacks with nuclear weapons enhance the ability of the United States to deter such attacks?
- Are there physical phenomenon associated with a nuclear detonation that would be effective for defeating chemical or biological agents?
- Would the political consequences and collateral weapon effects outweigh the benefit of eliminating the chemical or biological threat?
- What operational deployment doctrines, planning, and procedures should be considered?

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Priority: 3

Key Terms: CBRW, nuclear retaliation, chemical weapons, biological weapons

1.37 How do we engage U.S. allies (East Asia, Europe, Russia, and South Asia) in U.S. missile defense programs and initiatives? (See also topic 1.22)

- What is their potential role in the U.S. missile defense posture?
- How important is international cooperation to the success of U.S. missile defense policies?
- How should regional efforts to acquire missile defense capabilities (e.g., Japan, Israel, NATO, etc) be integrated with U.S. global missile defense priorities and objectives?
- How will the U.S. missile defense capabilities be integrated into NATO's strategic concept and NATO's emerging missile defense program?
- Examine case studies in cooperative missile defense systems, such as:
 U.S.-Israel and Arrow program
 U.S.-Germany-Italy and MEADS (Medium Air Defense System). Examine the "black box problem."
 U.S.-Russia and JDEC (Joint Data Exchange Center), TMDX.
 U.S.-Japan and sea-based TMD.

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Priority: 3

Key terms: missile defense, NATO and strategic concept, Arrow program, MEADS, JDEC, TMDX, cooperative missile defense